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**Research areas** : Perovskite thin film field effect transistors



**Title of the research** : Fabrication and characterization of Perovskite thin film field effect transistors

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**Current position** : Research Assistant, Clean Energy Research Lab, University of Jaffna

#### **Description of current and past research:**

I have been working on the optical and electrical engineering of Perovskite thin film field effect transistors since 1<sup>st</sup> of February 2021. Perovskite materials are considered as the prominent successors to the conventional semiconductors as they show an outstanding PCE in PV solar cells. Perovskite materials are extensively studied as the active channel layer in thin film FETs to perform various device applications. I look forward to corroborating a significant improvement in the Perovskite FET through studies of fabrication and characterization of thin film FETs with different metal halide Perovskite based semiconducting channels.

#### **Journal publication:**

Air Processed Cs<sub>2</sub>AgBiBr<sub>6</sub> Lead-free Double Perovskite High-mobility Thin Film Field-effect Transistors, **Gnanasampanthan Abiram**, Fatemeh Heidari Gourji, Selvakumar Pitchaiya, Punniamoorthy Ravirajan, Thanihaichelvan Murugathas, Dhayalan Velauthapillai, Scientific Reports, 2021, 1–14.

#### **Conference abstract:**

Perovskite semiconductors for thin film field effect transistors, **Gnanasampanthan Abiram**, Fatemeh Heidari Gourji, Selvakumar Pitchaiya, Punniamoorthy Ravirajan, Thanihaichelvan Murugathas, Dhayalan Velauthapillai Proceedings of Technological Advances in Science, Medicine and Engineering Conference (TASME-2021), Virtual, 3-4 July 2021